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ABSTRACT

A study examined communication patterns based on sex differences and status in the organization, specifically analyzing managerial behavior on one aspect--messages of control and instruction giving--of superior-subordinate communication in the corporate setting. Subjects, 24 first-line managers, 12 males and 12 females, recruited from five large corporations in the midwest, participated, along with their superiors and one subordinate for each manager, in a communication interaction exercise. Results indicated no significant differences between male and female managers on any component of "communication control"--defined here as the communicative behaviors that restrict the type, direction, frequency, and amount of participation of the other person. The same pattern (no significant gender differences) held, regardless of whether the manager was dealing with his or her subordinate or superior. Clear status differences, on the other hand, were reported. Findings showed that managers (regardless of sex) did communicate differently with subordinates than with superiors (again, regardless of sex). Results were not in the direction expected, however, in that managers overall directed more control toward superiors than subordinates. (Tables of data and references are appended.) (NKA)

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ABSTRACT

Sex and Status Differences in Communication Behavior of Managers

The goal of this research study was to describe and analyze relationships among **status, sex, and use of communication control behaviors of corporate middle managers**. Multiple methods were employed, consisting of a field experiment used in conjunction with self and other report questionnaires. Overall results revealed no pattern of significant sex differences in the amount of communication control exerted by managers in interaction with their subordinates or superiors.

In Body Politics, Henley observed a "confusion" in the work on sex and power in communication:

> They are often confounded. That is, males are more likely to have power, females to be out of it. If we identify a particular behavior as more associated with one sex, how can we know whether the basis of the association lies in the sex difference or the power difference (1977, p. 17)?

This "confusion" presents a research problem and opportunity. If one can locate an exceptional instance in which women are clearly of higher status (and men of lower), one may be able to isolate to some degree the two confounded variables of sex and status, thereby more acccurately accounting for them when comparing female and male communication behavior.

Such an instance is available. Today, women constitute one-third of the managerial ranks (Hymowitz & Schellhardt, 1986). Corporate management offers a context in which status and authority levels are clearly demarked, and in which women have attained enough higher status positions that a significant number serve in positions superior to men in the organizational hierarchy.

A spate of research studies has documented perceptions (see Stogdill, 1981), but the communication behavior of women and men of corporations has not been widely studied. Studies have explored: how managers are perceived to act, respond, lead; how females and male superiors are perceived to behave differently or not; and how female managers are

perceived in the business world at large. Attribution and survey studies of perceptions of women managers abound, but few researchers have entered the corporation to observe or analyze actual female/male communication behavior. Some field studies represent surveys or interviews conducted on the perceptions of subordinates and co-workers of managers, especially women managers. The multitude of perception studies, however, dwarf the few studies using outside observations in attempts to describe actual managerial behavior.

There is one attribution/perception study on management, however, that is notable on two counts: Dansereau, Graen and Haga (1975) developed the "vertical dyad approach," a method designed to attempt to corroborate perceptions of supervisors. This required venture into the field, interviewing actual superordinate and subordinate dyads to ascertain correspondence of perceptions of the development of their relationships over time. The researchers found the quality of relationships between superior and subordinate within the same work unit varied greatly but could be identified as falling into two camps, "negotiating subordinates" who were treated as an in group by the supervisor, receiving preferential treatment, higher amounts of information, influence, confidence and concern (Dansereau, Graen & Haga, 1975, p. 70); and "constrained subordinates" who were treated as an out group, considered hired hands for whom the relationship with the superior remain perfunctory and role-centered.

This vertical dyad method was an impressive perception research

attempt that recognized context considerations, used actual employees to study business relationships, yet attempted to identify power and influence related differences [some are more equal than others] in superior-subordinate relationships. Unfortunately, no sex breakdown was possible because the sample was exclusively male. Greater validity could have been attained first, by utilizing a larger sample of managers (N was 60), secondly, by continuing the study of vertical dyads moving up the organizational ladder and, finally, by corroborating all the analyzed perceptions with those of outside observers as well.

Although perceptual and attribution study of managerial behavior has made enoromous contributions to consideration of issues of productivity and sex differences, the methods have been overused, and the correspondence of such perceptions to actual behavior remains unexplored. In addition, powerful images of typical male and female managers are described and perhaps perpetuated by these attribution studies and subsequent citings thereof, while the truth of the behavioral differences (if any) based on sex remains unknown.

The goal of the present study was to observe and describe one aspect of actual interaction between females and males in the corporate setting. Only one large-scale study has been undertaken to observe and document sex differences in managerial behavior. R. M. Kanter (1977) conducted a study of men and women in a major corporation. It was a landmark empirical/observational study combining massive survey, interview, and observational reports, the results of which indicated evidence of a

"masculating" [this author's term, used as opposed to emasculating] process of females moving up the corporate ladder. Female managers were observed to behave much like their male counterparts. Kanter basically asserted that "the job makes the person" (p. 3); overall Kanter located few sex differences, including communication behavior, that were not more accurately attributed to status roles than to sex. On a smaller scale, Nassau (1978) similarly attempted to isolate status and sex effects in communication of dominance as exhibited by female and male employees in on-going mixed-sex dyads. Analyzing audiotapes for dominant communication behaviors of turn taking (interruption and overlaps), Nassau produced no significant differences attributable to either sex differences or to organizational status.

The strength of both the Kanter and Nassau studies was their field designs. Nassau's work, although much less comprehensive than Kanter's, used 90 subjects in dyads who were employees who actually worked together and recorded them in their work context. Chosen dyads also represented a variety of status/sex combinations: male of higher status/female of lower status, female of higher status/male of lower status, and male/female of equal status. The weakness of the design was that the discussion topics for the ten minute interaction were not germane to the work context, nor was control placed on the level within the organization represented by the various dyads.

Research designs are badly needed that attempt to compare the <u>behavior</u>, not just the perceptions, of managers across equivalent jobs and

compare them then to managers of different ranks as well. The present study aimed to describe observed communication patterns based on sex differences and status in the organization differences. Research attention to the interaction of men and women of corporations affords the opportunity to isolate sex and status effects within managerial communication research. Quoting reviewers of managerial communication literature:

> ...only a few studies have examined actual differences in managerial behaviors.... There remains a need to examine specific differences in communication behaviors exhibited by male and female managers in settings other than education or the military (Baird & Bradley 1979, p. 103).

This methodological point is consistent with advice on organizational communication research in general: As Trujillo argued, "if we are to shed any insight...then we must spend more time in organizations listening, recording, and analyzing how managers and other members talk to each other in their everyday organizational lives" (1985, p. 220). This is not to say that laboratory and attributional research should cease, but rather that they should be improved by moving more toward studying actual interaction or actual relationships in actual work settings. Touhey (1974) made just that suggestion on studies of women professionals in general.

Design

The design of the present study aimed to analyze managerial behavior on one aspect of superior-subordinate communication in the corporate

setting, specifically, in messages of control and instruction-giving. The control aspect was chosen as a typical and important aspect of the manager's job, as an issue affecting women in management, and one that applies to both upward and downward managerial communication (Katz & Kahn, 1966).

The design contained three tiers of corporate status to allow comparisons of control communicated upward, downward, as well as between and within sex groupings. By analyzing actual conversations, the study tested whether communication between structurally equivalent subordinate-superordinate dyads reflected reported results in self and other reports of attributional research studies.

Status, defined as formal position in the organizational hierarchy, was controlled for in the present study by confining the study to first-line managers in large corporations, communicating in dyads: upward, with an immediate superordinate or superior and downward, with an immediate subordinate. To include all permutations of males and females at all levels, a 16 cell design was required.

A "field experiment" design was constructed as a methodology that hopefully capitalized on the merits of field and laboratory methods without compromising either. The procedure for the present study was to engage 24 first-line managers in a direction-giving interaction exercise involving two trials, one they performed with an immediate superior and one with a subordinate (N = 72). The order of trials was varied and no feedback allowed between trials. All trials were audiotaped. The simulation was ostensibly a

communication accuracy exercise. The simulation itself was adapted from an exercise known as the "one versus two way feedback exercise," popular for use in communication classes (Leavitt & Mueller, 1951). Essentially, in this exercise a designated sender must convey instructions to a receiver, a situation that typifies everyday managerial interaction. Together the two subjects worked to complete the direction-giving task. No explicit instructions were given. It was up to the particular individuals to negotiate the "rules for participation" in this task, as in most business interactions. The entire transaction was audiotaped.

A nonrandom corporate sample was used because of the need for a heterogeneous and particular mix of subjects. The sample consists of 24 first-line managers, 12 males and 12 females, recruited from five large corporate organizations in the midwest. Participation of each manager's superior and one subordinate was required. No subject participated more than once, and equal numbers of males and females were represented at all three levels--subordinate, first line manager and superior. All subjects were debriefed immediately upon completion of the exercise.

The hypotheses revolved around sex differences in the communicating of control. The research questions addressed were:

1. Do female and male first-line managers exert equal amounts of control in their communication with subordinates?

2. Do female and male first-line managers exert equal amounts of control in their communication with superiors?

3. Do female managers vary more than male managers in the amounts

of communication control they exhibit with subordinates?

With superiors? Across the subordinate/superordinate condition?

4. Does the sex of the superior and subordinate interact with the sex of the manager to affect amount of communication control exerted by the manager?

The definition of communication control used in the present study referred to, "the communicative behaviors which restrict the type, direction, frequency, and amount of participation of the other person" (Putnam & Skerlock, 1978, p. 6). The operationalization of the construct "communication control" therefore consisted of frequency counts of conversational control devices observed being used by managers in simulated interaction with their superiors and subordinates. According to Bochner (1976), in most observational studies, verbal frequencies such as these are coded.

Frequency counts were calculated on three operations.

1) amount of one way versus two way communication indexed by relative amounts of talk time (control of the floor).

The exercise had no specified time limit. Relative amount of talk time was a gross but typical measure of power. All interaction of the individuals was timed as suggested by Hadley and Jacob (1976), then timings were double checked for accuracy.

2) the number of statements and questions (and tag questions) employed.

3) the amount of successful interruption and resistance of

interruption. Successful interruption was used because resisting (talking over the interrupter, according to Putnam and Skerlock, 1978), or in other words, interrupting "back" rather than relinquishing the floor countermands an attempted interruption, while "...acceptance of an interruption is believed to reflect a submissive reaction" (Kennedy & Camden, 1982, p. 53). In addition, interruptions were calculated by rate rather than by frequency (Rogers & Jones, 1975) because total talk time and an individual's floor time can potentially greatly affect this rate.

Occurrence of all indices except the first were reported in occurrence per minute to control for the individuals' total talk time dictating all frequencies, as suggested by Eakins and Eakins (1978) and others. Individual indices were analyzed separately.

This "field experiment" was designed as a departure from standard attribution and field research designs. When posing this methodological alternative, Barnes defined a "field experiment" by using French's distinction between it and a field study: "In a field experiment, the experimenter manipulates conditions to some extent, conditions are to some degree "contrived" (in Vroom, 1967):

> ...the field experiment provides the ideal vehicle for studying organizational change....The laboratory sets up temporary human relationships which all too often have a pretend-like quality. Organizations require relationships that are, so the slang expression goes, 'for real' (Barnes, in Vroom, 1967, p. 77).

Weick suggested validity would improve if one, "...structures a

field study so that it contains more of the controls found in the laboratory" (1967, p. 49). The above was precisely the goal of the present study. By analyzing "real life" interaction of managers with their actual subordinates and superordinates in their own offices, this study aimed to gather field data. Nonetheless, by inserting a simulated task and controlling the sex and status composition of the dyads, this study introduced a modicum of laboratory controls and inherent threats to validity.

The present design is consistent with specific recommendations by Schein (1977) in a critical analysis of studies conducted on women in management. Schein commented:

> A key factor here is the interplay between organizational observation and laboratory experimentation. Given the complex nature of these variables, neither on-site descriptive research nor isolated laboratory research would be sufficient. An overtime flow of research information between the two might overcome problems inherent in the former and the limited scope and reality simulation issues inherent in the latter (1977, p. 70).

Two major related methodological problems are evident in a review of the literature on all three concepts of this paper--in sex and status difference research, in power and communication issues and in research on women in management. All three reveal: (1) an over-reliance on laboratory and attributional studies that fail to **resemble** the managerial context, and (2) they also produce interaction that is not **embedded** in the actual relationships of subjects. All three therefore suffer serious external validity threats.

Weick summarized the validity issues that represent particular difficulties of transferring laboratory research results to real world contexts by employing the two terms used above: **resemblance and embeddedness** (Weick, 1965).

Research must be **embedded** "in a task in a network of relationships" (Weick, 1969, p. 229), highlighting the need to employ actual as opposed to contrived relationships in research. Blumer (1972) contended:

> ...the point is grossly ignored. It is necessary to recognize that the sets of meanings that lead participants to act as they do at their stationed points in the network have their own setting in a localized process of social interaction... (1972, p. 416).

This relational authenticity issue seems a most critical element in communication research. Blumer continued:

> One is on treacherous and empirically invalid grounds if he [sic] thinks that any given form of joint action can be sliced off from its historical linkage, as if its makeup and character grew out of the air through spontaneous generation instead of growing out of what went before (1972, p. 416).

Addressing the issue of station as status, Fleishman and Harwell (1977) commented on the inappropriateness of laboratory research in studies of status: "It has been almost impossible to create positions on status dimensions which have real significance to the subjects--certainly not the significance of the social statuses in real life" (p. 4).

Applied to the present study, the pressing **resemblence** issues were:

a) choosing an appropriate physical setting for the study,

b) capturing the transactional flavor of interaction since, "the degree to which one controls a conversation or a relationship is determined in part by how controlling one is allowed to be" (Cherry, 1975, p. 179). After all, a receiver affects the sender as well as the sender affecting a receiver.

c) designing a task that adequately resembled a typical managerial communication episode; one in which the situation had "mundane realism" in that it approximated one of the primary everyday tasks required of managers.

Two pioneering attempts toward more truly interactive communication coding systems exist (Rogers & Farace, 1975; Ellis, 1979). Correspondence between the two similar coding schema proved to be poor however (O'Donnell-Trujillo, 1981). While all coding is by nature subjective, these methods require the coder to move beyond describing data into functional or interpretive analysis of what acts constitute "one-up or one down" maneuvers. Thus, in coding for the present study, frequency counts on individual acts were counted to describe interactive variables, but not truly "interacts", to avoid crossing the line into largely perceived or inferential research methods. Appropriate follow-up analysis to this descriptive research includes comparison to the functional analysis schema.

The control and hence artificiality of the laboratory is evident in the design of the present study by its use of a simulated task. The hazard of using a simulated task is that it may not indeed evoke natural or realistic interaction between superior and subordinate. The alternative of charting spontaneous talk indeed had more face validity, but thwarted the

researcher's ability to make reasonable comparisons across the diverse content of particular tasks and conversations in which the dyads engage daily. It seemed reasonable that insofar as the task of giving directions has been determined to be a primary managerial task, and insofar as the task and the communication style evoked by the dyads in giving and receiving directions was deemed by the subjects as typical behavior, the results should have validity.

If the task proved invalid, at least the invalidity would be consistent across conditions, still allowing detection of conversational behavior differences (if any exist) between status and sex conditions. In the end, results were interpreted to the degree the subjects deemed the communication in the exercise typical.

To that end, after each round both participants completed a questionnaire designed to serve as a validity check on the exercise. Among a number of filler items, this self and other report asked several direct questions about the manager's normal communication style and how much the communication in this exercise deviated from normal or typical behavior of the manager. For the manager this self-report also queried to what degree in each condition (as subordinate or superior) the manager felt in control. That allowed comparison of the manager's perceptions of control across conditions. The superior/subordinate was asked who s/he felt was more in control during the exercise, to be answered on a five point Likert scale.

A second validity measure, a conflict style inventory (Simpson, in

Jones & Pfeffer, 1977), was administered to the participants to ascertain to what degree the behavior elicited in this exercise was consistent with everyday conflict communication style of the sender.

Analysis of the Data

Teams of two trained but blind coders worked coding the tapes, but were checked for inter-coder reliability and inter-team reliability as well. For the inter-coder check, frequency of inital (individual) and final disagreements were calculated on approximately 25% of the coded tapes. Acceptable levels of inter-coder reliability were set at .80, on a simple percentage of agreement (POA). In addition, inter-team reliability statistics were calculated on a random 5% of the tapes. Heatherington and Allan (1984) proposed using 10% for this procedure, a procedure completely lacking in most coding research. 5% was established in this study because of the massive amounts of data A total of 9,384 utterances were coded, ranging from a high of 546 within a single exercise to a low of 4 for one dyad's exercise.

Coding issues abound. Occurrences of coder drift and "ad hocing" are inevitable, so coding rigor was attempted according to guidelines recommended by Beach (1980), Hadley and Jacob (1976), Huston (1983) and Weider-Hatfield and Hatfield (1984) by:

1) coding from both tape and transcript,
2) the use of the two coders working alone and then together,
3) thorough training of teams of coders including reviews for "ad

hocing" situations, defined by Beach as the method of a coding team for improvising coding decisions for irregular communication situations, a phenomenon that occurred in the present study even up through the last coding session.

In addition, a sensitive reliability measure was chosen (chi-square as opposed to Pearson r, as recommended by Weider-Hatfield & Hatfield, 1984) and, although it was not specifically recommended in any previous studies, the use of blind coders should only have increased the rigor of the coding procedure.

Statistical analysis performed on the data was the split-plot analysis of variance (Ivan program, Weisberg & Koehler, 1982). The Ivan program was chosen for its ability to handle complicated within group as well as across group comparisons. Most male/female communication studies are confined to between sex comparisons, overlooking the potential significance of within group variance ranges, a lack Henley (1977) observed with a call for within group comparisons in male/female behavioral research. Finally, to insure validity as best as possible in the present study, all results of the study were interpreted and qualified to the degree to which subjects assessed the simulated task to have evoked typical interaction.

Results

This study was designed primarily to allow descriptive analysis and comparison of the degree of control exhibited by male and female managers,

as well as to provide comparisons for individuals on control exerted in two status conditions: as subordinate and superior. **Overall, the results revealed no pattern of significant sex differences in the amount of communication control exerted by managers with subordinates or superiors.** Specifically, no significant sex differences were detected between male and female managers on the following operations of communication control: frequency of statements, frequency of questions and tag questions, proportion of talk time, and frequency of successful and resisted interruptions.

Tables 1 and 2 (see appendix) present an overview of the results showing the means and the within cell standard deviations for each group on each component of communication control. These tables reflect the reported differences between and among groups on dimensions of **sex** of manager (Table 1) and **status** (Table 2) on each of the component communication control operations. Analysis of the individual components of communication control follows.

STATEMENTS: There was no significant effect detected through analysis of variance for sex of manager in frequency of statements directed to his or her superior or subordinate, $F(7, 16) = 1.509$, $p < .23$, nor were any interaction effects detected, $F(7, 16) = .6237$, $p < .72$. Instances considered "back channel" or confirming responses such as "okay" or "right" were eliminated from the statement category to avoid distortion of this frequency count. Managers did however direct significantly more statements to their superiors than to their subordiantes. Analysis of

variance indicated a significant status effect, F (1, 16) = 14.27, p < .002. This effect was in an unexpected direction.

QUESTIONS: No significant differences were detected by the analysis of variance on any dimension of use of questions. No sex difference emerged, F (7, 16) = .5851, p < .76; no difference in treatment of superiors and subordinates emerged, F (1, 16) = .6444, p < .44; no interaction effects were found, F (7, 16) = 1.048, p < .44.

TAG QUESTIONS: The same results are reported for use of tag questions. Again, no sex or status differences were detected, and no interaction effects were located. The analysis of variance produced values for sex of: F (7, 16) = .6555, p < .71; for differential treatment of superior versus subordinate on tag questions: F (1. 16) = 1.194, p < .30.

PATTERNS OF INTERRUPTION: Both successful interruption and resisting interruption were operationalized as displaying communication control. Attempted interruption indicated loss of or acceding communication control. Here again, the analysis of variance produced no significant differences among managers attributable to sex, in terms of successful interruption, F (7, 16) = .9353, p < .51; for resisted interruptions, F (7, 16) = 1.196, p < .36. No significant interaction effects were located for any interruption behavior.

When the data were analyzed by status, however, a statistically significant different picture emerged. In regard to successful interruption,

status intervened. Managers, regardless of their sex, successfully interrupted their superiors significantly more than they interrupted their subordinates, F (1, 16) = 5.959, $p < .03$. This effect was also in an unexpected direction.

Resisting interruption showed the same pattern of managers resisting more the interruption of their superiors than their subordinates but the results did not reach statistical significance, F (1, 16) = $p < .12$. Considering attempted interruptions, status once again provided significant differences F (1, 16) = 6.243, $p < .03$. With attempted interruption, the direction was again that managers attempted more interruptions with their superiors than with their subordinates.

TALK TIME: The final communication control operation reported was talk time, defined as the percentage or proportion of the total (conversation) talk time that one held the floor. This category also included pauses, hesitation and the brief periods of silence normal in everyday interaction. In terms of the behavior of the managers, the results of the analysis of variance for this category were as follows: Sex of the manager again failed to discriminate, F (7, 16) = .5238, $p < .80$, whereas status once again produced great significant differences, F (1, 16) = 10.97, $p < .001$. No interaction effects were found F (7, 16) = .2397, $p < .96$. In other words, male and female managers controlled the floor equivalent proportions of the time, but as a group, managers varied the amount of their talk time depending on with whom they were sharing the time. The direction of the difference was, this time, in the expected direction--that managers talked

significantly greater proportions during the conversation with subordinates than with superiors.

Overall then, no significant differences were detected between male and female managers on any component of communication control. Significant differences were consistently found, however, when examining the communication control exerted by managers (regardless of sex) with their superiors as opposed to their subordinates. In most cases, managers exhibited more communication control with their superiors than with their subordinates. Specifically, managers exhibited more communication control with their superiors via frequency of statements and interruption behaviors. In the category of talk time, the significant difference was in the opposite direction-- managers spoke a significantly greater proportion of the time with their subordinates as compared to their superiors.

Because the construct communication control was broken down into several operations for data analysis, response to the overall research questions originally posed is now warranted:

Question 1: Do female and male first-line managers exert equal amounts of control in their communication with subordinates? These data indicate a "yes" response to this question in that no significant differences between male and female managers were detected.

Questions 2: Do female and male first-line managers exert equal amounts of control in their communication with superiors? Again, a "yes" response is indicated from the data. No significant differences were located in the communication control behavior of male and female managers

with their superiors.

Question 3: Do female managers vary more than male managers in the amounts of communication control they exhibit with subordinates? With superiors? Across the subordinate/superordinate condition? A "No" response is appropriate for all three questions. These questions were designed to address within subject group comparisons (e.g. among female managers, among male superiors, etc.). Comparisons of the variance in standard deviation terms presented in Table 1 between male and female managers in different conditions do not reflect significant differences in the control behavior of female compared to male managers.

Question 4: Does the sex of the superior and subordinate interact with the sex of the manager to affect amount of communication control exerted by the manager? "No". No interaction effects were detected in the analysis on any of the components for managers, subordinates or superiors.

Reliability estimates were calculated according to standards described by Weider-Hatfield and Hatfield (1984) concerning careful measurement in coding communication episodes. Areas of inter-coder unit disagreement were calculated on 14 of the 96 communication exercises. The percentage of agreement (POA) averaged .83 (POA; 82.5 for one set of coders on 9 tapes, .85 for another set of coders on five tapes). This estimate was the only inter-coder reliability calculation possible, and does not take into account chance agreement. After the first six exercises in which coders coded together, the two coders worked independently, then together. They were instructed to calculate initial disagreements for every fourth exercise.

Chi-square met all established criteria mentioned earlier for a reliability statistic. With the exception of one exercise, the chi-squares calculated on five randomly selected exercises proved statistically significant at or beyond the .01 level (see appendix, Table 3). The one exceptional exercise (p slightly greater than .10) was examined. The cause for the discrepancy was one category--questions: one team had coded 2, one team had 10. This was one of the largest discrepancies noted in the entire data set, and accounted for 47% of the total x^2: 2.67 of 5.68. No explanation was found for this isolated but large discrepancy.

Concerning validity, in the follow-up survey subjects reported the point of the exercise to be related to techniques and skills of communication or giving instructions. None of the 72 subjects discerned the sex difference or even the status difference hypothesis. In terms of how typical the manager was perceived to have behaved, both self and other reports reflected a relatively high degree of validity of the exercise in eliciting normal and typical behavior.

Managers' self reports on this question were rated as follows: The cutoff point indicating reasonable degree of validity was set at the midpoint of the five point scale. Simple percentages are cited: 79% of the managers rated themselves as communicating in typical fashion (or in 38 of the 48 trials managers reported themselves at above the 2.5 level on the scale). In no case was there substantial disagreement between the self and other report; it was, however, occasionally a matter of degree.

Superiors and subordinates addressed the same question concerning typicality of their managers' communication behavior during the exercises. Results were: 83% of the receivers reported the manager's communication behavior as typical. A second validity measure employing a conflict style scenarios failed to discriminate among managers in their conflict styles as perceived by their superiors and subordinates.

Correlations and multiple regressions were computed for the degree of correspondence between the combined control indices exhibited by the subjects and their own perceptions (their responses to question five on the questionnaire) of who was in control during the interaction. For the managers, the multiple regression produced an R^2 of .31 (40 df, residual mean square, .8447). For the receivers-- superiors/subordinates--the multiple regression produced an R^2 of .36, (40 df, residual mean square, .9199), a figure only marginally higher. These correlation figures proved disappointing as validity checks. Apparently, the control measured in the exercise was not perceived in the same manner as the participants perceived control.

This lack of corroboration may though point out the distinct differences between results gained from self/other report and observer report. This serves as confirmation of Turk and Bell's (1972) assertion that self reports and observation reports do not tap the same phenomenon, supporting the case for the need for more descriptive research grounded in behavioral observation.

To recapitulate, reliability and validity checks were conducted. Although the reliability estimations computed were reported at acceptable significance levels, the procedures used to calculate them were not the most highly recommended or most rigorous. The validity checks reached acceptable rating levels (79% and 83%) although these percentages do not take into account chance agreement. Analyses of variance produced no significant differences on ratings of typicality, but did produce some differences on perceptions of control of the exercise. Multiple regressions and correlation results on questions of subjects' perceived control offered poor validity checks or corroboration on the observed control indices.

Discussion

The present study attempted to unravel the confounded variables of sex and status by studying one of the few available contexts in our culture in which women have power--in corporate management. By controlling and creating every permutation of sex combination with status in the corporate organization, this design offered a research opportunity to isolate to some degree these two confounded variables. The specific issue employed to unravel them was the issue of control in communication. Communication control was operationalized by talk time, statement versus question usage and patterns of interruption.

The research questions revolved around the relative amounts of communication control exerted by male and female managers in interaction under the varied conditions: with their superiors and with their

subordinates. The results indicated that there were no significant sex differences detected in the amounts of communication control exerted by female and male managers. Lack of a sex effect held regardless of whether the manager was dealing with his/her subordinate or superior. Quite clearly, significant sex differences did not appear. To borrow a catchy phrase, the study produced a "significant case of no significant differences" (Donnell & Hall, 1980). In light of results from the present study, the relationship between the two variables of sex and status would more acccurately be described as unfounded rather than confounded, at least as related to communication control.

Clear status differences, however, were reported. A consistent pattern did emerge in significant differences across the status condition. The data indicate that managers (regardless of sex) do communicate differently with their subordinates than they do with their superiors (again, regardless of sex). With the exception of questions, the operations indexing communication control reflected status differences. Conceptually, these results lend support to Kanter's (1977) observations that:

1) "the job makes the person" (p. 3),

2) "power wipes out sex" (p. 200),

3) "women...were sometimes very different from each other and sometimes not very different from men." (p. 302)

4) "sex differences seem to play a limited role, if any, once women are given a chance and access to power." (p. 303)

Results were not in the direction expected, however, in that

managers overall directed more control toward their superiors than their subordinates. One possible interpretation was that in their eagerness to impress and perform successfully with their superiors, managers took over the exercise. It may have been perceived as an opportunity for them to display how well they communicate and take charge. It may have been perceived by them as an exercise in "managerial" behavior, although no one mentioned it in the hypothesis guessing report.

Interesting to note was that the one category that failed to correlate with status was questions. The purposes of questions are somewhat paradoxical: to control the structure of the conversation while simultaneously deferring in it (Fisher & Drecksel, 1983).

Methodologically, the study provides evidence for the need for diversity of method in studying questions of sex differences. The results of the welter of attributional studies have overwhelmed evidence gathered from direct behavioral research studies. Within the abundant existing sex difference documentation, it may be that there are truly two issues being researched that have not sufficiently been separated in literature reviews: how we think we communicate and how we are observed to communicate. This seems an obvious distinction, but it is blurred in generalized reviews of the massive sex difference literature in communication. Again, this may attest to how critical the call is for diverse or multiple methods to be used in researching any communication topic. It raises questions of the correspondence between results produced by perceived/attributed difference studies and results of studies observing or documenting actual

communication episodes. It also questions the validity of studies using simulated relationships rather than real or ongoing relationships to assess sex differences in communication, and argues for a continued push for field research.

It must be registered that the present study was not true observational field research though, and that the results may have been due to simulated not natural conversation. Participants may have felt they were engaged in a task that had no bearing on their everyday jobs. Validity reports did however rate the communication by the managers as "mostly typical" of their communication, thus bolstering validity and reducing the likelihood of this effect. Results must be qualified, however, to the extent that they were rated as typical by self and other reports. Although largely these did confirm the control and communication patterns, the fact that self and other reports did not always perfectly coincide should be noted.

The most important qualification on this study is that it represents essentially qualitative research. Coding is more an art than a science, and only gross measures of communication control were being measured by coding. In the coding, numerous instances of ad hocing and arbitrary coding practices were located. All results should be interpreted with these qualifications in mind. Also, the chosen operationalization may not have adequately tapped power dimensions on female/male differences in communication.

More thorough coder training could perhaps reduce the amount of

"ad-hocing" as well as increased the consistency among coders across coding categories. The instruments constructed to obtain the data seemed appropriate, but the statistics used were not the most effective. Reliability and validity measurement could have been more rigorous.

In the present study the research decision was to risk simulating the task to obtain control of it across managerial contexts in a trade-off for the gain in realism and integrity of using actual manager-subordinate relationships. The trade-off was one element of internal validity ventured for a gain on what was judged to be the most critical external validity issue. The best answer to this methodological trade-off question on the balance of external validity measures in this study was to employ multiple methods as recommended by Weick, 1969; Bronfenbrenner, 1979; Cromwell and Olson, 1975; and others. So, multiple methods were incorporated into the design (simulated interaction, self and other report questionnaire).

Three immediate research needs are apparent from this study, although potential research outgrowths of the present study are many and various. First, the study must be replicated in some fashion eliciting natural conversation from employees. Secondly, the nature of the dramatic status differences should be pursued. And finally, connection should be made between the body of attributional results the present results counter.

In general terms, new methodologies are needed to replace or augment shopworn attribution and laboratory methods. Data-based field information is required on how males and females compare as managers (Donnell & Hall,

1980; Schein, 1982; Touhey, 1974). What is not heeded in most studies on managers is the common sense notion that to best learn about male/female, superior/subordinate managerial communication, one must venture out into the business world and study individuals in those relationships.

References

Baird, John E. and Bradley, Patricia Hayes. "Styles of Management and Communication: A Comparative Study of Men and Women." Communication Monographs 46 (1979), 101-111.

Barnes, Louis B., "Organizational Change and Field Experiment Methods." p. 57-111 in Vroom, Victor H., Methods of Organizational Research, Pittsburgh, PA: University of Pittsburgh Press, 1967.

Beach, Wayne. "Reflexivity and the Analysis of Conversational Coding." Unpublished paper presented at the Central States Speech Communication Association, Chicago, IL, April, 1980.

Blumer, Herbert. "Symbolic Interaction." in Budd, Richard W. and Ruben, Brent D. Approaches to Human Communication. Rochelle Park, N J: Hayden Book Co., 1972.

Bochner, Arthur P. "Conceptual Frontiers in the Study of Communication in Families: An Introduction to the Literature." Human Communication Research, 2 (1976), 381-397.

Bronfenbrenner, Urie. The Ecology of Human Development. Cambridge, MA: Harvard University Press, 1979.

Cherry, Louise. "Teacher-Child Verbal Interaction: An Approach to the Study of Sex Differences." in Language and Sex: Difference and Dominance. Barrie Thorne and Nancy Henley, eds., Rowley, MA: Newbury House, 1975.

Cromwell, Ronald R. and Olson, David H. "Multidisciplinary Perspectives of Power." in Power in Families. Cromwell, Ronald R. and Olson, David H. (eds.), New York: Sage Publications, John Wiley and Sons, 1975.

Dansereau, Fred Jr.; Green, George; and Haga, William J. "A Vertical Dyad Linkage Approach to Leadership with Formal Organizations: A Longitudinal Investigation of the Role Making Process." Organizational Behavior and Human Performance, 13 (1975), 46-78.

Donnell, Susan M. and Hall, Jay. "Men and Women as Managers: A Significant Case of No Significant Difference." Organizational Dyamics, (1980), 60-77.

Eakins, Barbara Westbrook and Eakins, R. Gene. Sex Differences in Human Communication. Boston, MA: Houghton Mifflin Company, 1978.

Ellis, Donald G. "Relational Control in Two Group Systems." Communication Monographs, 46 (1979), 153-166.

Fisher, B. Aubrey and Drecksel, G. Lloyd. "A Cyclical Model of Developing Relationships: A Study of Relational Control Interaction." Communication Monographs, 50 (1983), 66-78.

Fleishman, John and Marwell, Gerald. "Status Congruence and Associativeness: A Test of Galtung's Theory." Sociometry, 40 (1977), 1-11.

Hadley, Trevor R. and Jacob, Theodore. "The Measurement of Family Power: A Methodological Study." Sociometry, 39 (1976), 384-395.

Henley, Nancy M. Body Politics: Power, Sex, and Nonverbal Communication. Englewood Cliffs, New Jersey: Prentice-Hall,Inc., 1977.

Huston, Ted L. "Power." in Kelley, H. H.; Berscheid, E.S. ; Christensen, A.; Harvey, J.; Huston, T. L.; Levinger, G. McClintock, E.; Peplau, A.; and Peterson, D. R. Close Relationships. San Fransisco, CA: Freeman, 1983.

Hymowitz, Carol and Schellhardt, Timothy D. "The Glass Ceiling." The Wall Street Journal, March 24, 1986, p. 1 part 4.

Kanter, Rosabeth Moss. Men and Women of the Corporation. New York: Basic Books, Inc., 1977.

Katz, Daniel, and Kahn, Robert L. The Social Psychology of Organizations, New York: John Wiley and Sons, Inc., 1966.

Kennedy, Carol W. and Camden, Carl T. "A New Look at Interruptions." Western Journal of Speech Communication, Winter, (1982), 45-58.

Leavitt, H.J.; Mueller, R. "Some Effects of Feedback on Communication." Human Relations, 4 (1951), 401-410.

Nassau, Bruce A. "The Influence of Sex Differences and Organizational Status Upon Speech Dominance." Unpublished paper presented at the International Communication Convention, Chicago, Illinois, April, 1978.

O'Donnell-Trujillo, Nick. "Relational Communication: A Comparison of Coding Systems." Communication Monographs, 48 (1981), 91-105.

Putnam, Linda L. and Skerlock, Linda. "Verbal and Nonverbal Determinants of Dominance in Sex-Type Female, and Androgynous Dyads." Paper presented at the International Communication Association Convention, Chicago, IL, April, 1978.

Rogers, L. Edna and Farace, Richard V. "Analysis of Relational Communication in Dyads: New Measurement Procedures." Human Communication Research, 1 (1975), 222-239.

Rogers, William T. and Jones, Stanley E. "Effects of Dominance Tendencies on Floor Holding and Interruption Behavior in Dyadic Interaction." Human Communication Research, (1975), 113-122.

Schein, Virgina E. "Power and Political Behaviors in Organizations: A New Frontier for Research on Male/Female Differences." in Women and the World of Work, Anne Hoiberg, ed. New York: Plenum Press, 1982.

Schein, Virginia E. "Individual Power and Political Behavior in Organizations: An Inadequately Explored Reality." Academy of Management Review, January, 1977, 64-72.

Simpson, Donald T. "Conflict Styles: Organizational Decision Making." in Jones, John E. and Pfeiffer, Wm. The 1977 Handbook for Group Facilitators. CA.: University Associates, 1977.

Stogdill's Handbook of Leadership: A Survey of Theory and Research. Bernard Bass, ed., revised and expanded edition, New York: The Free Press, 1981.

Touhey, John C. "Effects of Additional Women Professionals on Ratings of Occupational Prestige and Desirability." Journal of Personality and Social Psychology, 29 (1974), 86-89.

Trujillo, Nick. "Organizational Communication as Cultural Performance: Some Managerial Consideration." The Southern Speech Communication Journal, 50 (1985), 201-224.

Turk, J. W. and Bell, M. W. "Measuring Power in Families." Journal of Marriage and the Family, 34 (1972), 215-222.

Weick, Karl E. The Social Psychology of Organizing, Reading, MA: Addison-Wesley, Co., 1969.

Weick, Karl E. "Organizations in the Laboratory." Ch. 1 in Vroom, Victor H., Methods of Organizational Research, Pittsburgh, Pa.: University of Pittsburgh Press, 1967.

Weick, Karl E. "Laboratory Experimentation with Organizations." Ch 5 in March, James G. Handbook of Organizations. Chicago, IL.: Randall Publishers, 1965.

Weider-Hatfield, Deborah and Hatfield, John D. "Reliability Estimation in Interaction Analysis." Communication Quarterly, 32 (1984), 287-292.

Weisberg, Sanford and Koehler, Kenneth. Ivan Users Manual, Version 2.1 University of Minnesota School of Statistics, 1982.

APPENDIX

Table 1

Communication Control Exerted by Managers
(By sex of the manager, in frequencies per minute)

Group[a]	Components						
					Interruptions		
	Statements	Questions	Tag Quest	Talk Time	Successful	Resisted	Attempted
FEMALE MANAGERS							
M	9.95	.762	.582	.717	.309	.168	.158
SD	3.16	.513	.601	.171	.359	.178	.249
MALE MANAGERS							
M	9.03	.591	.377	.748	.272	.136	.139
SD	3.21	.531	.328	.128	.448	.279	.239
p <	**.24**	**.75**	**.71**	**.80**	**.51**	**.36**	**.87**

a- n= 24 in each group

Table 2

Communication Control Exerted by Managers
(By status level, in frequencies per minute)

Group[a]	Components						
						Interruptions	
	Statements	Questions	Tag Quest	Talk Time	Successful	Resisted	Attempted
SUPERIORS							
M	10.91	.61	.42	.66	.43	.22	.23
SD	3.61	.58	.50	.15	.71	.37	.29
SUBORDINATES							
M	8.01	.74	.54	.80	.15	.08	.06
SD	2.51	.48	.5	.11	.32	.17	.16
p <	.002	.43	.29	.004	.03	.11	.02

a- n= 24 in each group

Table 3

Results of Chi-Square Tests for Inter-team Coding Reliability
(on Five Communication Exercises)

$x^2(11, N = 87) = 2.97, p < .01$

$x^2(11, N = 112) = .89, p < .001$

$x^2(11, N = 82) = 1.24, p < .001$

$x^2(11, N = 216) = 5.68, p > .10$

$x^2(11, N = 120) = 2.4, p < .001$

11= df